Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A routing control device comprising

a routing control database storing ~~a~~ routing configuration policy for at least one routing system implementing an exterior gateway protocol, wherein the exterior gateway protocol identifies network routes to network destinations and aggregates, for each autonomous system, network path information;

a routing control module operable to enforce the routing configuration policy to a routing system operably connected thereto.

2. (currently amended) The routing control device of claim 1, wherein the routing system comprises a BGP routing configuration, and wherein the routing control module translates the BGP routing configuration of ~~a~~ the routing system into a rule set and checks the rule set for conflicts with the routing configuration policy ~~configuration~~.

3. (currently amended) The routing control device of claim 2 wherein the routing control module modifies the BGP routing configuration of the routing system in response to a conflict between the rule set and the routing configuration policy ~~configuration~~.

4. (original) The routing control device of claim 1 wherein the routing control module facilitates traffic engineering associated with at least one routing system.

5. (currently amended) The routing control device of claim 4 wherein the routing control module comprises

(a) a routing path preference evaluator operative to evaluate the paths across autonomous systems; and

(b) a path preference applicator operable to apply path preferences to a routing system.

6. (currently amended) A routing control device for managing routing policy executed by a routing system implementing an exterior gateway routing protocol, comprising:

(a) a routing path preference evaluator operative to evaluate the network paths across autonomous systems; and

(b) a path preference applicator operable to apply path preferences to ~~a~~ the routing system.

7. (currently amended) The routing control device of claim 6 wherein ~~the routing control device is operably coupled to a routing system~~ the exterior gateway routing protocol is the Border Gateway Protocol (BGP).

8. (currently amended) The routing control device of claim 7 wherein the routing system includes a routing table comprising a plurality ~~of~~ of routing paths; and wherein the path preference applicator is operable to inject preferred routing paths into the routing table of the routing system.

9. (currently amended) The routing control device of claim 6 wherein the routing path preference evaluator evaluates a given routing path across an autonomous system according to at least one performance metric.

10. (currently amended) The routing control device of claim 6 wherein the routing path preference evaluator is operable to load balance traffic among a plurality of ~~inter-domain~~ inter-autonomous system (AS) peers.

11. (currently amended) The routing control device of claim 10 further comprising a routing control database including an ordered set of ~~inter-domain~~ inter-autonomous system peers; wherein the routing path preference evaluator is operable to determine the respective traffic loads for a plurality of destination networks; and wherein the routing path preference evaluator is operable to select routing paths to balance the traffic load associated with the destination networks across the plurality of ~~inter-domain~~ inter-autonomous system peers.

12. (original) The routing control device of claim 11 wherein the path preference applicator is operable to inject the routing paths selected by the routing path preference evaluator.

13. (original) The routing control device of claim 6 wherein the path preference evaluator is operable to evaluate performance metrics associated with routes on the computer network.

14. (original) The routing control device of claim 6 wherein the path preference evaluator is operable to query a central source of path preference data.

15. (original) The routing control device of claim 6 wherein the path preference evaluator evaluates routing paths with respect to a plurality of metric tests.

16. (original) The routing control device of claim 15 wherein the path preference evaluator selects a path for a given destination based on a weighted aggregate of a plurality of metric tests.

17. (original) The routing control device of claim 6 or 7 wherein the path preference applicator transmits path preference data using the BGP protocol.

18. (currently amended) An ~~Internet appliance~~ apparatus for manipulating BGP routing policy, comprising:

(a) a routing path preference evaluator operative to evaluate the paths included in BGP autonomous systems; and

(b) means for applying path preferences to routing devices.

19. (original) The ~~Internet appliance~~ apparatus of claim 18 wherein the routing path preference evaluator evaluates a path according to at least one performance metric.

20. (currently amended) A method facilitating the control of routing policy in a routing system operably connected to a computer network, wherein the routing system exchanges routing

policy data with peers over the computer network, the method comprising the steps of:

(a) applying a preferred path to the routing system, wherein the preferred path includes at least one remote autonomous system;

(b) monitoring operation of the routing system for withdrawal, by one of the peers of the routing system, of the preferred path applied in step (a); and,

(c) applying a next preferred path to the routing system in response to the withdrawal of the preferred path injected in step (a).

21. (currently amended) A method facilitating the control of routing policy in a routing system operably connected to a computer network, the method comprising the steps of:

(a) receiving a network destination operably connected to a remote network, wherein the remote network includes a broadcast address;

(b) determining the broadcast address corresponding to the remote network ~~destination~~;

(c) determining the peers having reachability to the network destination;

(d) injecting a route to the broadcast address ~~that includes the first peer having reachability to the network destination~~ as a host route into a routing system, wherein the route includes the first peer having reachability to the network destination;

(e) testing the performance of the path ~~through~~ that includes the first peer, using the broadcast address, with respect to at least one performance metric;

(f) repeating steps (d) and (e) for all peers having reachability to the network destination; and

(g) applying the path having the best performance metric(s) to a routing system.

22. (currently amended) The method of claim 21, wherein the routing system exchanges routing policy data with peers over the computer network, further comprising the steps of:

~~(e)~~ monitoring operation of the routing system for withdrawal, by one of the peers of the routing system, of the path applied in step (g); and,

~~(e)~~ applying the next best path to the routing system in response to the withdrawal of the path applied in step (g).

23. (original) The method of claim 21 wherein the testing step (e) comprises

(e1) testing the performance of the path with respect to a plurality of performance metrics, wherein each performance metric has an associated weighting value;

(e2) weighting each performance metric according to the weighting value associated therewith;

(e3) aggregating the weighted performance metrics to yield an aggregate performance value for each path.

24. (original) The method of claim 23 wherein the applying step (g) comprises applying the path having the best aggregate performance value.

25. (currently amended) A system facilitating control of routing policies in connection with a computer network, comprising

a plurality of data collectors operably connected to the computer network; wherein the data collectors are operable to define and test traffic paths on the computer network across multiple autonomous systems and generate path preference data;

a central server operably connected to the plurality of data collectors to receive and merge path preference data from the data collectors;

at least one routing control device operably connected to the central server; wherein the routing control device is operable to query the central server for a preferred path to a network destination.

26. (original) The system of claim 25 wherein the data collectors are operable to assemble path preference data into a data structure.

27. (original) The system of claim 26 wherein the data structure characterizes the topology of the computer network.

28. (original) The system of claim 26 wherein the data structure is a tree and the data collector is the root of the tree.

29. (currently amended) A system for mapping a computer network, comprising:

(a) a plurality of data collectors operably connected to the computer network; wherein the data collectors are operable to define and test traffic paths across multiple autonomous systems on the computer network and generate path preference data;

(b) a central server operably connected to the plurality of data collectors to receive and merge path preference data from the data collectors.

30. (original) The system of claim 29 wherein the data collectors are operably attached to the backbone of the computer network.

31. (currently amended) A method allowing for mapping of path preferences associated with a computer network, the method comprising the steps of:

(a) receiving a plurality of network routes, wherein at least one of the network routes traverses an autonomous system;

(b) selecting a network route from the plurality of network routes;

(c) defining the path for the network route; the path including at least one intermediate node;

(d) testing the performance of the path, wherein the performance is tested relative to at least one of the following metrics: round trip time, jitter and packet loss;

(e) storing path and performance data for each intermediate node in the path; and,

(f) repeating steps (b) - (e) for all network routes received in step (a).

32. (original) The method of claim 31 wherein the defining step (c) comprises the steps of:

(c1) defining the ingress interfaces of the intermediate nodes in the path; and,

(c2) heuristically determining the egress interfaces of the intermediate nodes in the path based on the ingress interface information gathered from step (c1).

33. (original) The method of claim 32 wherein the defining step (c1) comprises the steps of:

(c1a) transmitting a packet to the destination host of the network route; wherein the

packet includes a parameter operable to cause the first intermediate node in the path to transmit an error message in response;

(c1b) recording the IP address of the first intermediate node; and,

(c1c) repeating steps (c1a) and (c1b) for all intermediate nodes in the path.

34. (original) The method of claim 32 or 33 wherein the defining step (c2) comprises the steps of:

(c2a) applying a network mask to the network address of the ingress interface of the node subsequent to the first intermediate node to determine the potential network address(es) for the egress interface of the first intermediate node;

(c2b) transmitting a packet to the potential IP address(es) to identify the network address of the egress interface corresponding to the first intermediate node; wherein the packet includes a parameter operable to cause the first intermediate node in the path to transmit an error message in response;

(c2c) if step (c2b) does not identify the network address of the egress interface, expanding the network mask and repeating steps (c2a) and (c2b) until the network address of the egress interface is identified.

35. (currently amended) A method facilitating the determination of best path routing policy for a routing system operably connected to a computer network, the computer network comprising a central routing policy server and a plurality of data collectors associated with the central routing policy server, wherein the data collectors are operable to define and test routing paths <u>across a plurality of autonomous systems</u> on the computer network, the method comprising the steps of:

(a) defining the paths on the computer network to each of the data collectors;

(b) transmitting a best path request to the central routing policy server; the request including a destination network address and the paths to each of the data collectors;

(c) receiving a best path to the network destination address;

(d) injecting the path into a routing policy implemented by the routing system.

36. (original) The method of claim 35 further comprising the step of:

(e) testing the validity of the path received in step (c) before the injecting step (d).

37. (currently amended) A method facilitating the determination of best path routing policy for a routing system operably connected to a computer network, the computer network comprising a central routing policy server and a plurality of data collectors operable to define and test routing paths between a plurality of autonomous systems on the computer network, wherein the central routing policy server is operably connected to a routing policy database storing routing path information associated with the computer network, the routing path information including at least two nodes and a metric characterizing each available path among the nodes, the method comprising the steps of:

(a) receiving, at the central routing policy server, a request for best path routing policy from a first device; the request including a destination network address and the respective paths from the first device to the data collectors;

(b) determining the best network path by logically connecting the requested destination network with the local connection node associated with the first device; and,

(c) transmitting the best network path to the first device.